

Application No. 10/509,644
Amdt. Dated: April 19, 2006
Reply to Office Action Dated: April 4, 2006

REMARKS/ARGUMENTS

Rejection of Claims Under 35 U.S.C. 112, Second Paragraph

Claim 6 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, in the Office Action it is asserted that the distance between the first and second viewpoints would be interpreted as a range from one to an infinite number of millimeters. This rejection should be withdrawn for at least the following reasons. Claim 6 has been amended herein to recite that the distance between the first and second view points is at least one millimeter. This limitation can be found at page 8, line 8, of the detailed description. Accordingly, this rejection should be withdrawn.

The Anticipation Rejection

Claims 1, 7, and 13-15 stand rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu (US 5,953,013). This rejection should be withdrawn for at least the following reasons. Shimizu does not teach or suggest each and every element as set forth in the subject claims.

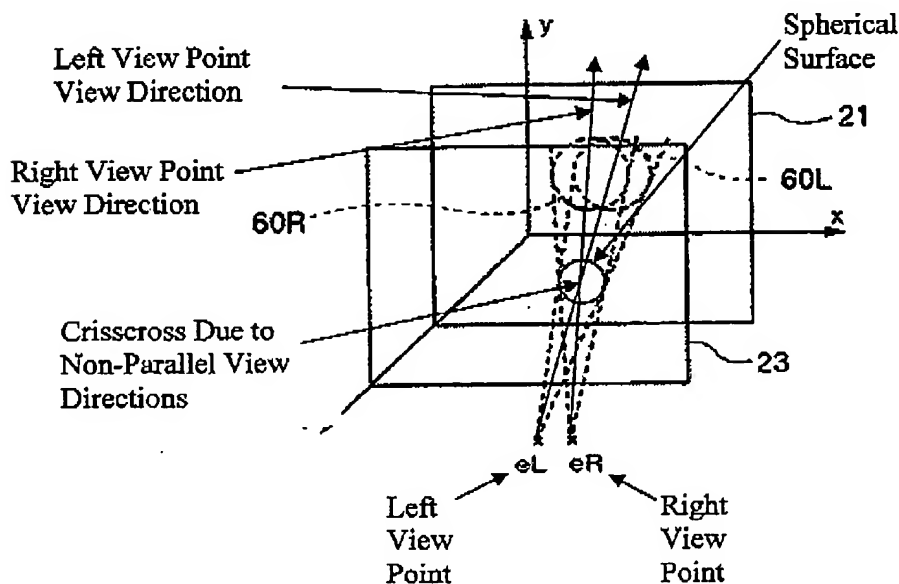
In particular, independent claims 1 and 13 have been amended herein to incorporate the elements of originally filed claim 7. Amended claim 1 (and similarly amended claim 13 and claim 14) recites calculating an image for a left eye from a first view point and an image for a right eye from a second view point that differs from the first view point. The first and second view points have view directions that are essentially parallel to each other. Shimizu does not teach or suggest such claimed aspects.

In the subject Office Action (dated April 4, 2006), it is asserted that Shimizu teaches first and second different view points having essentially parallel view directions as recited in the subject claims. The Office Action references Figure 11 of Shimizu as support for this assertion. However, Figure 11 does not teach or suggest view points with

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view directions that are essentially *parallel* to each other as recited in these claims. Instead, Figure 11 teaches view points with view directions that *meet and crisscross* and, thus, are not parallel to each other.

More particularly, Shimizu teaches using an eye-ball transformation technique to stereoscopically observe three-dimensional images in which left and right view points are directed towards a spherical surface disposed therebetween. (See col. 16, ll. 30-33, col. 12, ll. 23-33, and Figure 11). As a consequence of such positioning, the view directions of the left and right view points *meet and crisscross* at the sphere. This is illustrated below in a reproduction of Figure 11, which also includes superimposed view directions since Figure 11 does not graphically illustrate these directions. As depicted, the left and right view points eL and eR are directed at a spherical surface and their corresponding view directions *meet and crisscross* at the sphere.



In view of the above, it is readily apparent that Shimizu does not teach or suggest each and every element as set forth in claims 1, 13, and 14. Claim 7 has been

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incorporated into claim 1 and, as a result, has been cancelled herein. By virtue of its dependency on claim 1, claim 15 is allowable for at least the reasons discussed above. In view of the foregoing, it is respectfully requested that the rejection of claims 1 and 13-15 be withdrawn.

The First Obviousness Rejection

Claims 2-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu in view of Lorensen et al. (US 5,611,025). This rejection should be withdrawn for at least the following reasons.

Amended claim 2 further recites that one of the first and the second view points lies on the view path. Lorensen et al. does not teach or suggest two view points wherein one of the view points lies on the view path as recited in the subject claim. Instead, Lorensen et al. discloses stepping along a view points within a viewpoint path, wherein two separate images are generated from the viewpoint, one corresponding to a left eye view from the viewpoint path and the other corresponding to a right eye view from the viewpoint path, and the two images are used for stereoscopic viewing along the viewpoint path. (See col. 4, ll. 65-67 and col. 5, ll. 13-15 and ll. 29-33). Thus, Lorensen et al. teaches generating left and right eye images from view points on a viewpoint path. In contrast, the subject claim recites two view points, a first and a second view point, wherein only one of the two view points resides on the view path. Therefore, Lorensen et al. does not teach this aspect of the claimed invention.

Moreover, there is no suggestion or motivation to combine these references as suggested in the Office Action. In particular, Shimizu teaches that for stereoscopic viewing the two view points are shifted away from the viewpath in the direction of the eyes (See col. 13, ll.7-15), whereas Lorensen et al. teaches that for stereoscopic viewing the viewpoint remain on the view point path. (See col. 4, ll. 65-67 and col. 5, ll. 13-15 and ll. 29-33). Hence, modifying Shimizu in view of Lorensen et al. would result in a change in the principle of operation as taught in Shimizu and, thus, the teachings of the references are not sufficient to render the claims prima facie obvious. (See MPEP

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§2143.01 – “The Proposed Modification Cannot Change the Principle of Operation of a Reference”). In view of the foregoing, it is readily apparent that Shimizu in view of Lorenson et al. does not make obvious claim 2. Therefore, this rejection should be withdrawn.

Claims 3-5 depend from claim 1, and by virtue of their dependency, these claims are allowable for at least the reasons discussed above in connection with claim 1. Thus, the rejection of claims 3-5 should be withdrawn.

The Second Obviousness Rejection

Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu in view of Orgino (US 6,672,794). The rejection of this claim should be withdrawn for at least the following reasons. Claim 6 depends from claim 1, and by virtue of this dependency, claim 6 is allowable for at least the reasons discussed above in connection with claim 1. Therefore, this rejection should be withdrawn.

The Third Obviousness Rejection

Claims 8 and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu in view of Palm (US 5,748,199). The rejection of claims 8 and 9 should be withdrawn for at least the following reasons. Neither Shimizu nor Palm suggest or provide a motivation for the modification purported in the Office Action. In particular, Shimizu relates to projecting a digital tomographic image on a digital projection plane, whereas Palm relates to converting two-dimensional film based motion pictures to three-dimensional film based motion pictures. It would not be obvious at the time of the invention for one of ordinary skill in the art of digital tomographic imaging to look to techniques for converting film motion pictures from 2D to 3D. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (See MPEP §2143.01 – “Fact That References can be Combined or Modified is not Sufficient to Establish Prima Facie Obviousness,” In re Mills, 916 F.2d 680 (Fed. Cir. 1990)). Therefore, it is respectfully requested that this rejection be withdrawn.

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The Fourth Obviousness Rejection

Claims 10 and 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu in view of Palm and further in view of Chiu (US 5,606,348). This rejection should be withdrawn for at least the following reasons. As described above, there is no suggestion or motivation to combine the teachings of Shimizu and Palm. In addition, claims 10 and 11 depend from claim 1, and by virtue of their dependency, these claims are allowable for at least the reasons discussed above. Accordingly, this rejection should be withdrawn.

The Fifth Obviousness Rejection

Claim 12 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu in view of Chiu. The rejection of claim 12 should be withdrawn for at least the following reasons. Claim 12 depends from independent claim 1. By virtue of this dependency, claim 12 is allowable for at least the reasons discussed above. Accordingly, this rejection should be withdrawn.

Newly Added Claims

Claims 16-20 have been added to further emphasize aspects recited in originally filed claims. In particular, claim 16 recites limitations similar to claim 6, and claims 17, 18, and 19-20 recite limitations similar to claims 2, 3, and 5, respectively. No new matter has been added. It is believed that the newly added claims are in condition for allowance for at least the reasons set forth above. Applicant kindly requests entry of these amendments.

Claim Amendments

Claims 1-6, 8-13, and 15 have been amended herein to cure typographical errors, improve grammar, and conform to US patent practice. These amendments are not intended to substantially alter the scope of the claims.

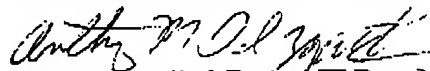
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Conclusion

In view of the foregoing, it is submitted that claims 1-6 and 8-20 distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,

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